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IN THE CLAIMS

Please amend claims 1, 7, 13, and 18-20 as indicated below so that after entry of the amendments the claims remaining under consideration will read as follows:

1. (Currently amended) An antenna consisting essentially of comprising:
a substrate of dielectric material defining a longitudinal axis of the substrate and a surface of the substrate; and
a plurality of electrically conductive elements disposed on the surface of the substrate to form a Yagi-Uda dipole array.

92 2. (Original) The antenna of claim 1 wherein the Yagi-Uda dipole array includes a driven element and one or more parasitic elements, and electromagnetic energy is coupled from the driven element to the parasitic element through space and by surface waves in the substrate.

3. (Original) The antenna of claim 2, wherein the driven element comprises a dipole having a first and a second dipole element extending colinearly in opposite directions from and perpendicular to the substrate axis, the dipole elements having adjacent ends spaced apart at equal distances on either side of the substrate axis.

4. (Original) The antenna of claim 2 wherein the parasitic elements include a reflector and one or more directors.

5. (Original) The antenna of claim 2 comprising six or less directors.

6. (Original) The antenna of claim 4 comprising six directors.

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7. (Currently amended) The antenna of claim 4 3 wherein the reflector is disposed on one side of the driven element and the directors are disposed on the other side of the driven element.

8. (Original) The antenna of claim 6:
wherein the driven element comprises a dipole having a first and a second dipole element extending colinearly in opposite directions from and perpendicular to the substrate axis, the dipole elements having adjacent ends spaced apart at equal distances on either side of the substrate axis; and
wherein the reflector and directors extend linearly across, are centered upon, and oriented perpendicular to the substrate axis.

9. (Original) The antenna of claim 6 wherein:
the length of the reflector is in the range of 1.08 to 1.3 times the length spanned between of the outer ends of the first and second dipole elements; and
the length of the director is in the range of 0.8 to 0.95 times the length spanned between of the outer ends of the first and second dipole elements.

10. (Original) The antenna of claim 8 wherein:
the dipole, directors and reflector each respectively define a centerline thereof, and the antenna is adapted to broadcast a signal having a free space wavelength;
the distance between the center of the dipole and the center of the reflector is about 0.25 times free space wavelength; and
the distance between the center of the dipole and the center of the closest director and the spacing between adjacent directors is about 0.325 times free-space wavelength.

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11. (Original) The antenna of claim 9 comprising one reflector and six directors.

12. (Original) The antenna of claim 10 wherein:

the dipole has an overall length of about 0.944 inches, with the inner ends spaced apart a distance of about 0.078 inches;

the reflector has a length of about 1.02 inches and has a center spaced about 0.51 inches from the dipole center;

the directors have a length of about 0.767 inches and have centers spaced from one another at a distance of about 0.614 inches, the director adjacent the dipole being spaced about 0.614 inches from the center of the dipole;

and one or more of the dipole, directors and reflector have a width extending parallel to the substrate axis of about 0.047 inches.

13. (Currently amended) An apparatus comprising:

an antenna support; and

an antenna mounted on the antenna support, the antenna consisting essentially of comprising:

a substrate of dielectric material defining a longitudinal axis of the substrate and a surface of the substrate; and

an plurality of electrically conductive elements disposed on the surface of the substrate to form a Yagi-Uda dipole array.

14. (Original) The apparatus of claim 13 wherein the Yagi-Uda dipole array of the antenna includes a driven element and one or more parasitic elements, and electromagnetic energy is coupled from the driven element to the parasitic element through space and by surface waves in the substrate.

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15. (Original) The apparatus of claim 13 wherein the antenna support is comprised of a dielectric material and is the substrate.

16. (Original) The apparatus of claim 13 wherein the apparatus is an electronic device for communicating through the antenna.

17. (Original) The apparatus of claim 13 wherein the antenna support is a printed circuit board of the apparatus.

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18. (Currently Amended) The apparatus of claim 13 wherein the apparatus is ~~includes~~ a PCMCIA card and the PCMCIA card includes the antenna support.

Cont.
19. (Currently amended) The apparatus of claim 13 wherein the apparatus comprises a vehicle including ~~having a structure forming~~ the antenna support.

20. (Currently amended) The apparatus of claim 13 ~~19~~ wherein the antenna support is an inside surface of a body panel of a ~~the~~ vehicle.
